



PROVINCE OF DAVAO OCCIDENTAL

LAND RESOURCES EVALUATION AND SUITABILITY **ASSESSMENT OF STRATEGIC PRODUCTION AREAS**



LAND SUITABILITY MAP

CASSAVA



REPUBLIC OF THE PHILIPPINES DEPARTMENT OF AGRICULTURE **BUREAU OF SOILS AND WATER MANAGEMENT** SRDC Bldg., Elliptical Road Cor. Visayas Avenue, Diliman, Quezon City 1101 Tel/Fax No.: (+632) 332-9534 E-mail: bswmclientcenter@yahoo.com

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS PROVINCE OF DAVAO OCCIDENTAL



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LAND SUITABILITY MAP FOR CASSAVA

LAND RESOURCES EVALUATION AND SUITABILITY ASSESSMENT OF STRATEGIC PRODUCTION AREAS **DAVAO OCCIDENTAL, REGION XI**

EXTENT OF SUITABILITY FOR CASSAVA PRODUCTION BY MUNICIPALITY

						EX	PANSION A	AREA (H	la)			CONFLIC	Γ RESOLI	UTION AI	REA (Ha)		TOTAL
MUNICIPALITY	EXISTIN	NG CASSA	VA (Ha)	TOTAL EXISTING AREA (Ha)	Coco	onut	Shrubl unmana		Grassl unmana	-	Bana	ana	Co	rn	Other c	rops	POTENTIAL EXPANSION AREA (Ha)
	S1	S2	S 3		S1	S2	S1	S2	S1	S2	S1	S2	S1	S2	S1	S 2	AREA (IIA)
DON MARCELINO	-	_	-	-	27	1,423	-	-	4	118	-	80	-	-	-	-	1,653
JOSE ABAD SANTOS	-	-	-	-	192	2,825	-	1	44	676	-	1	1	20	-	1	3,760
MALITA	-	-	-	-	813	5,252	1	47	40	666	11	479	15	65	6	147	7,542
SANTA MARIA	-	_	-	-	3,475	1,652	-	-	23	380	-	-	-	-	16	1	5,546
SARANGANI	-	_	-	-	120	2,191	-	-	-	-	-	-	-	-	-	-	2,311
TOTAL	-	-	-	-	4,626	13,343	1	48	111	1,839	11	561	16	85	21	149	20,811

Note: Delivery of cassava planting materials must be started on the onset of rainy season. *establishment of shade trees prior to planting of cassava.

3 F2-D2

4 F2-Tc

5 F3-D2

9 T2-El2

8 T2-E2-Sh2-Rc2

10 T2-El2-E3-Rc3

6 Sh2

7 T2

13 T2-F3-D2

14 |T3

15 T3-E3

16 T3-E3-Rc2

17 T3-E3-Sh2-Rc2

18 T3-E3-Sh2-Rc3

19 T3-E3-Sh3-Rc2

20 T3-E3-Sh3-Rc3

23 T3-El2-E3-Rc3

28 T3-El3-E3-Rc3

25 T3-El2-E3-Sh2-Rc3

26 T3-El2-E3-Sh3-Rc2

24 T3-El2-E3-Sh2-Rc2 34 T3

27 T3-El2-E3-Sh3-Rc3 37 T3-E3-Sh3-Rc3

30 T3-El3-E3-Sh2-Rc3 **40** T3-El2-E3-Sh3-Rc3

29 T3-El3-E3-Sh2-Rc2 **39** T3-El2-E3

33 T3-F3-D2

36 T3-E3-Rc3

38 T3-El2

35 T3-E3

43 Tc

AGRONOMIC REQUIREMENT OF CASSAVA PRODUCTION

AGRONO	MIC REQU	JIREMEN	Г OF CAS	SAVA PRODU	JCTION									CLIMATE TYPE
LAND UTILIZATION TYPE	SUITABILITY RATING	SLOPE (%)	SOIL DEPTH (cm)	SOIL TEXTURE	SOIL DRAINAGE	SOIL REACTION (pH)	INHERENT FERTILITY	FLOODING CLASS	EROSION CLASS	ROCK OUTCROPS	ELEVATION (masl)	ANNUAL RAINFALL (mm)	CLIMATIC TYPE	TYPE I : Two pronouced season, dry from November to April and wet during the rest of the year. Maximum rain period is from June to September
	S1	<8	>50	FSL, L, SiL, CL, SiCL, SCL, SC, SiC, C	WD,MWD	5.6 -7.2	high	none-slight	none-slight	none-few	<500	1000-2000	I,II, III, IV	
Cassava	S2	8 - 18	30 - 50	SL, HC	SPD, PD	5.1 - 5.5 7.3 - 7.8	medium	moderate	moderate	common	500-1500	2001-4500	II	TYPE III : No very pronounced maximum rain period, with a dry
	S3	18 - 30	<30	S, LS, CSL	VPD,ED	<5.0 - > 7.9	low	severe	severe	many	>1500	<1000 >4500		season lasting only from one to three months, either during the period from December to February or from
SLOPE (%)	¢.	3	SOIL DRAI	NAGE	*	SOIL REACTION	DN (pH)	5	SOIL TEXT	URE		,	, ,	March to May. This type resembles Type I since it has a short dry season.
0-3 - lev	vel to gently slopin	ıg	ED	- excessively drained		< 4.5 - ex	tremely acid		Coarse			Fine		a short dry season.
3-8 - ger	ntly sloping to und	lulating	WD	- well drained		4.5 - 5.0 - ve	ery strongly acid		S ·	- sand		SC -	sandy clay	
	dulating to rolling			- moderately well drain	ned		rongly acid			- loamy sand			silty clay	
	lling to moderately	y steep		 somewhat poorly drai 	ined		edium acid			 coarse sandy loar 	n		clay	Davao Occidental is classified as climatic Type IV.
30 - 50 - ste				 poorly drained 			ghtly acid			- sandy loam		HC -	heavy clay	
> 50 - ver	ry steep		VPD	 very poorly drained 			eutral		Medium	<i>a</i>				
							ildly alkaline			- fine sandy loam				
SOIL DEPTH (c	-			MPEDIMENT			oderately alkaline			- loam				
	ry shallow		ROCK OUTC			> 8.5 - st	rongly alkaline			- silt loam				
	allow			- none - few						- clay loam				
	oderately deep			- common						- silty clay loam				
>100 - dee	ep to very deep		> 30%	- many					SCL ·	- sandy clay loam				RAINFALL PATTERN BY CLIMATE TY
														1000
														900
														500
														800
														700
														600
LAND LIN	MITATION	S DESCRI	PTION A	ND COMBINA	ATIONS									500
ELEVATION			SOIL DRA	INAGE			SOIL DEPTH			SOIL EROSIO	N			
	000m or 2000 - 25	00m		mewhat poorly drained	d to poorly draine			moderately deep	(30 - 100cm)		ate erosion			400
El3 - < 500m				ry poorly drained or ex			Sh3 - Very shallo			E3 - Severe				300
SLOPE/TOPOG	GRAPHY		SOIL TEXT	ΓURE]	ROCK OUTCROPS	5		FLOODING				200
T2 - Undulat	ting to moderately	steep	Tc - Co	arse texture]	Rc2 - Common			F2 - Moder	ate seasonal floo	ding		100
T3 - Steep to	very steep]	Rc3 - Many			F3 - Severe	e seasonal floodin	Ig		
1	1	1					1 1		1	1				JAN FEB MAR APR MAY JUN JUL AUG SE
CODE LIM	AITATION C	ODE LIMIT	ATION CO	DE LIMITATION	CODE	LIMITATION	CODE LIM	IITATION	CODE	LANDUS	3			
1 El2		11 T2-El2-Sh2		21 T3-El2	<u>31</u> T3-	El3-E3-Sh3-Rc2	41 T3-El3-	E3-Sh3-Rc3	4					CABANATUAN (Type III) MALAYBALAY (Type I
2 El2-Sh2		12 T2-F2-D2		2 T3-El2-E3		F2-D2	42 T3-El3			Diversified crops				
2 52 52		12 TO EO DO	1	$2 \pi^{2} \pi^$	22 00	C2 D2	10 m		05	110	1			Source: DACASA 2018 Climatological Normals (Painfall) Philipping Atm

85 Mango

89 Durian

91 Banana

116 Coconut

126 Grassland

137 Rubber (T)

134 Shrubs, unmanaged

107 Abaca

SUITABILITY CLASSES:



Highly Suitable (S1) Land having no significant limitation to sustained application of a given use, or only minor limitations that will not significantly reduce productivity or benefits and will not raise inputs above an acceptable level.

Moderately Suitable (S2)

Land having limitation which in aggregate are moderately severe for sustained application of a given use; the limitation will reduce productivity or benefits and increase required inputs to the extent that the overall advantage to be gained from the use, although still attractive, will be appreciably inferior to that expected on class S1 land.



Geophysical and Astronomical Services Administration (PAGASA), accessed 27 July 2018, ">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.ph/index.php/climate/climatological-normals>">https://www1.pagasa.dost.gov.php/climate/climate/climatological-normals>">https://www1.pagasa.dost.gov.php/climate/climate/climate/climate/climate/climate/climate/climate/climate/climate/climate/climate/climate/climate/climate/climate/cl

Marginally Suitable (S3) Land having limitations which in aggregate are severe for sustained application of a given use and will so reduce productivity or benefits, or increase required inputs, that this expenditure will be only marginally justified.

Not Suitable / Not Relevant Land having limitations which may be surmountable in time but which cannot be corrected with existing knowledge at currently acceptable cost; the limitations are so severe as to preclude successful sustained use of the land in the given manner. Existing forest, shrubland greater than 18% slope, irrigated paddy rice and miscellaneous land types such as built up areas, roads, etc are considered as not relevant.

- onouced season, dry from November to April and **TYPE II**: No dry season with a very pronounced maximum rain period from December to February. There is not a single dry month. Maximum monthly rainfall occurs during the period from March to May.
 - **TYPE IV** : Rainfall is more or less evenly distributed throughout the year. This type resembles Type II since it has no dry season.



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